

L1 169 S 2550-02-9/RN  
 L2 140 S 141-57-1/RN  
 L3 130 S N-PROPYLTRICHLOROSILANE OR PROPYLTRICHLOROSILANE  
 L4 287 S PROPYLTRIETHOXSILANE OR N-PROPYLTRIETHOXSILANE  
 L5 356 S L1 OF L4  
 L6 104 S L2 OF L3  
 L7 4 S L4 (S) (HYDROLYZATE OR CONDENSATE)  
 L8 54134 S L3 (S) HYDROLYZATE OR CONDENSATE  
 L9 1 S L3 (S) (HYDROLYZATE OR CONDENSATE)  
 L10 26 S (L3 OR L4) (4A) (POLYMER? OR OLIGOMER?)  
 L11 11 S (L3 OR L4) (4A) (HOMOPOLYMER? OR HOMOLIGOMER?)

FILE 'STNGUIDE' ENTERED AT 10:26:41 ON 08 NOV 2002

FILE 'CAPLUS' ENTERED AT 10:34:55 ON 08 NOV 2002

FILE 'STNGUIDE' ENTERED AT 10:35:16 ON 08 NOV 2002

FILE 'REGISTRY' ENTERED AT 10:40:42 ON 08 NOV 2002

L12 STRUCTURE UPLOADED  
 L13 0 S L12 EXA PUL

FILE 'STNGUIDE' ENTERED AT 10:41:44 ON 08 NOV 2002

FILE 'REGISTRY' ENTERED AT 10:44:29 ON 08 NOV 2002

L14 STRUCTURE UPLOADED  
 L15 0 S L14 EXA SAM  
 L16 0 S L14 EXA PUL  
 L17 STRUCTURE UPLOADED  
 L18 STRUCTURE UPLOADED  
 L19 0 S L18 SSS SAM  
 L20 1 S L19 SSS PUL

FILE 'CAPLUS' ENTERED AT 10:52:04 ON 08 NOV 2002

L21 1 S L20  
 L22 1 S 13501-75-2/RN  
 L23 0 S "1,3,5-TRIS(N-PROPYL)-1,2,5-TRIETHOXY-1,3-5 CYCLOTTRISILOXANE"  
 L24 0 S 1,3,5-TRIPROPYL-1,2,5-TRIETHOXY-CYCLOTTRISILOXANE

FILE 'REGISTRY' ENTERED AT 10:59:20 ON 08 NOV 2002

E "1,3,5-TRIPROPYL-1,3,5-TRIETHOXY-CYCLOTTRISILOXANE"/CN 25  
 E "1,3,5-TRIS(N-PROPYL)-1,2,5-TRIETHOXY-CYCLOTTRISILOXANE"/CN 25  
 L25 1 S L1 OF L2 AND (OLIGOMER? OR CONDENSATE?)

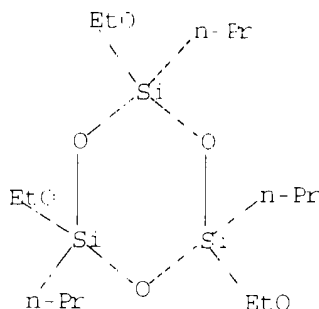
FILE 'CAPLUS' ENTERED AT 11:05:52 ON 08 NOV 2002

L26 183 S L1 OF L2 AND (OLIGOMER? OR CONDENSATE?)  
 L27 9 S (L1 OR L2) AND (OLIGOMER OR (PARTIAL OR LOW) (W) CONDENSATE)

=> d 112

L12 HAS NO ANSWERS

L13 STE

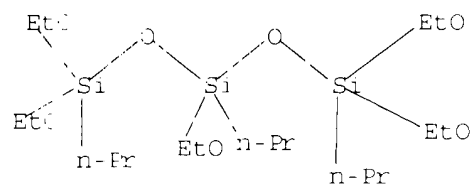


Structure attributes must be viewed using STN Express query preparation.

=> d 114

L14 HAS NO ANSWERS

L14 STF

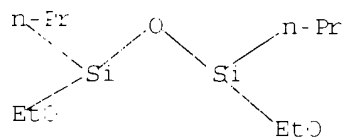


Structure attributes must be viewed using STN Express query preparation.

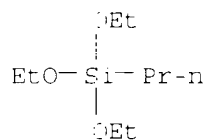
=> d 118

L18 HAS NO ANSWERS

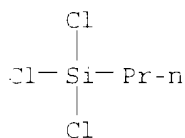
L18 STF



L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS  
 RN 2550-02-9 REGISTRY  
 CN Silane, triethoxypropyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Dynasylan PTEO  
 CN **n-Propyltriethoxysilane**  
 CN Propyltriethoxysilane  
 CN Si 203  
 CN Silar 1249  
 CN Triethoxypropylsilane  
 FS 3D CONCORD  
 MF C9 H22 O3 Si  
 CI COM  
 LC STN Files: ANABSTR, BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
 CHEMLIST, CSChem, GMELIN\*, IFICDB, IFIPAT, IFIUDb, SPECINFO, TOXCENTER,  
 USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



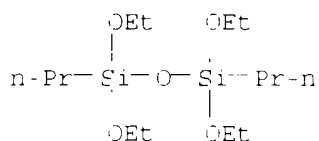
L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS  
 RN 141-57-1 REGISTRY  
 CN Silane, trichloropropyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN **n-Propyltrichlorosilane**  
 CN Propyltrichlorosilane  
 CN Trichloro-n-propylsilane  
 CN Trichloropropylsilane  
 FS 3D CONCORD  
 MF C3 H7 Cl3 Si  
 CI COM  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
 CHEMINFORMEX, CHEMLIST, CHEMSAFE, CS-CHEM, DETHERM\*, GELIN\*, HODOC\*,  
 HSDB\*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, SPECINFO, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

151 REFERENCES IN FILE CA (1962 TO DATE)  
 11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 151 REFERENCES IN FILE CAPLUS (1962 TO DATE)  
 40 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L21 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS  
 S0 Anal. Chem. (1966), 38(3), 1088  
 CODEN: ANCHAM; ISSN: 0003-2700  
 T1 1,2-Dichloroethane as a solvent for perchloric acid catalyzed acetylation  
 I7 **13501-75-2**, Disiloxane, 1,1,3,3-tetraethoxy-1,3-dipropyl-  
 (detn. of, 1,2-dichloroethane as solvent for HClO4-catalyzed  
 acetylation in)  
 RN 13501-75-2 CAPLUS  
 CN Disiloxane, 1,1,3,3-tetraethoxy-1,3-dipropyl- (7CI, 8CI) (CA INDEX NAME)



=> s 13501-75-2/rn  
     1 13501-75-2  
     0 13501-75-2D  
 L22      1 13501-75-2/RN  
           (13501-75-2 (NOTL) 13501-75-2D )

L11 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2001 ACS

TI Polyoxyalkylene group-containing polysilsesquioxanes with good compatibility to other polymers, their manufacture and use in coatings  
SO Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKKXAF

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001213962	A3	20010907	JP 2000-27969	20000904

AB The polysilsesquioxanes are those which have been modified to bear polyoxyalkylene groups which are introduced through the hydrosilylation of the SiH groups on polysilsesquioxane terminals with polyoxyalkylene compds. bearing an alkenyl end groups. Thus, dropping a soln. of n-propyltrichlorosilane 177.5, dimethylchlorosilane 47.3 and PhMe 46.1 to a mixt. of THF 63 and water 31.5 over 4 h at 5 degree. or below, heating at 30 degree. for 1 h, adding triethylamine 16.1, mixing for 1 h, adding water 4.5 g (to eliminate trace amt. of Si-bonded Cl), maturing at 30 degree. for 1 h and working up gave a polysilsesquioxane (I) bearing SiH groups. Hydrosilylation of the I with Nissan Uniox PFA 5001 (PEG monomethyl ether) using Pt catalyst gave a viscous modified silsesquioxane, 1.0 g of which was combined with Acrydite A 801 (acrylic polyol) 20.0, and Takenate D 1801 (HMDI-TEP adduct) 0.1 g to give a coating compn. with good component compatibility.

IT 64-17-5DP, Ethanol, reaction products with silsesquioxane and dimethylchlorosilane and alkenyl-terminated polyoxyalkylenes, uses 160870-23 4DP, **Propyltrichlorosilane** hydrolytic

**homopolymer**, reaction products with dimethylchlorosilane and optionally with alos., hydrosilyated with alkenyl-terminated polyoxyalkylenes

RE: IXP (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyoxyalkylene group-contg. polysilsesquioxanes with good compatibility to other polymers, manuf. and use in coatings)

L11 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2001 ACS

TI Organosilane- and/or organosiloxane-containing coupling agents for filling polyamides

SO Ger. Offen., 10 pp.

CODEN: GWXXBX

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19961971	A1	20010613	DE 1999-19961972	19991221
	EP 1111001	A3	20010627	EP 2000-112195	20001006
	EP 1111001	A3	20020621		

Re: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP	2001214583	A3	20010911	JP 2000-285972	20001219
NO	2000006648	A	20010615	NO 2000-0048	20001212

AB Coupling agents for filled polyamides are (a)  $\text{RNH}(\text{CH}_2)_3\text{SiMexZ}_3\text{-x}$  (Z = C1-3 alkoxy, OH, or Cl; x = 0 or 1; R = C1-10 alkyl, C5-12 cycloalkyl, or C6-12 aryl), (b)  $\text{gtoreq.1}$  bis-secondary aminosilane, (c)  $\text{gtoreq.1}$  tertiary aminosilane, or mixts. of these silanes and siloxanes prepd. from these silanes; (b) mixts. contg. (i)  $\text{gtoreq.1}$  of  $\text{H}_2\text{N}[(\text{CH}_2)_3\text{NH}]_y(\text{CH}_2)_3\text{SiMexZ}_3\text{-x}$  (Z = C1-3 alkoxy, OH, or Cl; x = 0 or 1; y = 1-2), (c)  $\text{gtoreq.1}$  secondary aminosilane, and (or)  $\text{gtoreq.1}$  tertiary aminosilane, and (ii)  $\text{gtoreq.1}$  of  $\text{R}_1\text{SiMexZ}_3\text{-x}$  [I; Z = C1-3 alkoxy, OH, or Cl; x = 1 or 1; R1 = (F-substituted) C1-16 linear, branched, or cyclic alkyl], (c)  $\text{gtoreq.1}$  of  $\text{CH}_2=\text{CH}(\text{CH}_2)_n\text{SiMexZ}_3\text{-x}$  (II; Z = C1-3 alkoxy, OH, or Cl; x = 0 or 1; n = 0-20), or (c)  $\text{gtoreq.1}$  of  $\text{R}(\text{OCH}_2\text{CH}_2)_m(\text{CH}_2)_3\text{SiMexZ}_3\text{-x}$  (Z = C1-3 alkoxy, OH, or Cl; R = linear or branched C1-4 alkyl; R1 = H or Me; n = 5-20; m = 2 or 3; x = 0 or 1), and (or), optionally, (iii) siloxanes prepd. from these silanes; or (c) mixts. contg. (i)  $\text{gtoreq.1}$  of I and (ii)  $\text{gtoreq.1}$  of II, and (or), optionally, (iii) siloxanes prepd. from these silanes. A typical

molding compn. contained 50% Zytel 101L and 40% kaolin contg. 1% Dynasylan 1189 [2-(butylamino)propyltrimethoxysilane].

- IT 2031-67-6, Dynasylan MTES 160876-31-2, **Propyltriethoxysilane homopolymer** 347147-68-6, Dynasylan 4140 347147-70-0, VPS 9892  
EL: MOA (Modifier or additive use); USES (Uses)  
(mixt. with aminopropyltriethoxysilane; combinations of silanes and(or) siloxanes having secondary or tertiary amino groups or alkenyl groups or polyoxyalkylene groups for coupling agents for filled polyamides)
- IT 919-30-1, Dynasylan AMEO-T  
EL: MOA (Modifier or additive use); USES (Uses)  
(mixt. with **propyltriethoxysilane homopolymer**, combinations of silanes and(or) siloxanes having secondary or tertiary amino groups or alkenyl groups or polyoxyalkylene groups for coupling agents for filled polyamides)

L11 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2001 ACS

TI Transparent highly water-repellent silica coat with good heat and weather resistance

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JPKKAF

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI JP 2000144116	A2	20000516	JP 1998-218972	19981110
------------------	----	----------	----------------	----------

AB The uneven silica coat (surface roughness  $\geq 0.15 \mu\text{m}$ ) is derived by coating a soln. contg. trialkoxysilane condensate or the trialkoxysilane or its oligomer with a metal alkoxide or its oligomer on a substrate board and heat treatment. Prepg. a 1.35:5 Ph<sub>3</sub>EtO<sub>1.5</sub>Si-formamide soln., stirring with 1 mL 1 M HCl, coating on a treated glass board, and heating 1 min at 500.degree. gave a silica coat.

- IT 51350-55-1, Phenyltriethoxysilane homopolymer, sru 104741-08-8, Phenyltriethoxysilane homopolymer 155968-09-5, **Propyltriethoxysilane homopolymer**, sru 160876-30-2, **Propyltriethoxysilane homopolymer** 162123-57-6 209744-27-6, 2,2,3-Trifluoropropyltriethoxysilane homopolymer  
EL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(silica precursor; transparent highly water-repellent silica coat with good heat and weather resistance)

L11 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2001 ACS

TI Resin compositions containing polyorganosiloxane resin modifiers, their coating films, and curing of the films

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JPKKAF

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI JP 11210794	A2	19991109	JP 1998-134320	19980428
----------------	----	----------	----------------	----------

AB The compsn., useful as molding materials or coatings, comprise 1-99 parts resins and 1-99 parts polyorganosiloxanes prepd. by hydrolytic condensation of R<sub>1</sub>SiCl<sub>3</sub> and optional R<sub>1</sub>R<sub>2</sub>SiCl<sub>2</sub> and/or R<sub>1</sub>R<sub>2</sub>R<sub>3</sub>SiCl [R<sub>1</sub>-R<sub>3</sub> = C<sub>1</sub>-30 satd. hydrocarbyl, radically polymerizable unsatd. hydrocarbyl, C<sub>8</sub>-14 radically polymerizable arom. hydrocarbyl, (branched or cyclic hydrocarbyl-substituted) arom. hydrocarbyl, halohydrocarbyl] in aq. acls. Thus, a soln. contg. 10 g 20:10:10 Me methacrylate-2-hydroxyethyl methacrylate-Bu acrylate copolymer and 0.5 g PrSiCl<sub>3</sub> hydrolytic homopolymer was mixed with 0.1 g 3-aminopropyltriethoxysilane and applied on a stainless sheet to give a coating film showing good solvent resistance. Marking ink applied on the film was completely removed by wiping.

- ST polyorganosiloxane coating resin modifier; **propyltrichlorosilane** hydrolytic **homopolymer** polyacrylate coating modifier
- IT 160876-31-4F, **Propyltrichlorosilane** hydrolytic **homopolymer**

RL: IMF (Industrial manufacture); MDA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(polyorganosiloxanes as resin modifiers for coatings)

L11 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS

TI Manufacture of storage-stable polyorganosiloxanes

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JPKKAF

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11246662	A2	19990914	JP 1998-351499	19981210
US 6107505	A	20000302	US 1999-232401	19991202

AB The polyorganosiloxanes, useful for polymer modifiers, are manufd. by hydrolytic polycondensation of organochlorosilanes with uniform mixts. of alcs. and H<sub>2</sub>O. Thus, 20 g SiMeCl<sub>2</sub> was added dropwise to a mixt. of 50 g Me<sub>2</sub>CHOH and 2.4 g H<sub>2</sub>O at 20-28.degree. for 35 min, stirred at a room temp. for 3 h, and washed to give 2.2 g polymethylsiloxane showing Mn 1210, Mw 1910, and good storage stability at 40.degree. for 120 h.

IT 152315-80-1P, Methyltrichlorosilane hydrolytic homopolymer, ladder stru 155968-09-5P 156430-49-8P, Vinyltrichlorosilane hydrolytic homopolymer, ladder stru 156394-09-6P, Methyltrichlorosilane hydrolytic homopolymer 156938-91-1P, Vinyltrichlorosilane hydrolytic homopolymer 159238-14-4P 160876-31-2P, Ethyltrichlorosilane hydrolytic homopolymer 160876-32-4P,

**Propyltrichlorosilane hydrolytic homopolymer**

160929-45-0P, Ethyltrichlorosilane hydrolytic homopolymer, ladder stru 242798-17-0P 242798-18-1P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(manif. of storage-stable polyorganosiloxanes by hydrolytic polycondensation of organochlorosilanes)

L11 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS

TI Dual-cure fluorine-releasing dental adhesive compositions

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JPKKAF

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11209212	A2	19990803	JP 1998-6618	19980110

AB The comps., which are cured at ordinary temp. and sustained release F to prevent caries, contain (a) polysiloxane-coated metal fluorides, (b) olefinic monomers, (c) acidic monomers, (d) photopolymer. initiators, (e) org. peroxides, (f) tertiary amines, and (g) arom. sulfinic acids or their salts, and at least (g) is sep. packaged from (e) and (f). A compn. contg. bis-GMA (I) 40, triethylene glycol dimethacrylate (II) 40, 1-methacryloyloxydecyl dihydrogen phosphate 20, 2,4,6-trimethylbenzoyldiphenylphosphine oxide 1, BzO<sub>2</sub> 2, silane-coated quartz powder 200, and tetraethoxysilane homopolymer-coated NaF 5 parts was kneaded with another compn. contg. I 40, II 30, 2-hydroxyethyl methacrylate 30, Na 2,4,6-trisopropylbenzenesulfinate 1, N,N-diethanol-p-toluidine 2, and silane-treated quartz powder 200 parts and the paste was used as adhesive for sand blasted surface and alloy. The cured sample was soaked in H<sub>2</sub>O at 27.degree. for 14 h and then at 70.degree. for 30 days to show tensile strength 31.2 MPa, vs. 2.7 MPa for a control contg. uncoated NaF.

IT 11099-06-2P, Tetraethoxysilane homopolymer 25930-91-0P, Methyltriethoxysilane homopolymer 25254-45-2P, Ethyltriethoxysilane homopolymer 29434-35-1P, Vinyltriethoxysilane homopolymer 51350-55-1P, Phenyltriethoxysilane homopolymer, ladder stru 89845-27-8P, Hexyltriethoxysilane homopolymer 124741-08-8P, Phenyltriethoxysilane homopolymer 153215-80-1P, Methyltriethoxysilane homopolymer, ladder stru 155968-09-5P, **Propyltriethoxysilane homopolymer**, ladder stru 156430-49-8P, Vinyltriethoxysilane homopolymer, ladder stru 157445-38-0P, Hexyltrimethoxysilane homopolymer, ladder stru



150876-30-2P, **Propyltriethoxysilane homopolymer**

150929-49-7P, Ethyltriethoxysilane homopolymer, ladder sru

RL: PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(metal fluorides coated with; dual-cure F releasing dental adhesive compns. contg. polysiloxane-coated metal fluorides, olefinic monomers, acidic monomers, org. peroxides, tertiary amines, and sulfinic acids)

L11 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2000 ACS

TI Polysiloxane-coated metal fluorides and polymerizable fluorine-releasing dental compositions containing them

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKKXAF

PATENT NO	KIND	DATE	APPLICATION NO	DATE
JP 11158011	A2	19990615	JP 1997-324055	19971116

AB Metal fluorides coated with a polysiloxane layer are prepd. The compns., which reinforce tooth and prevent dental caries, contain (a) the above polysiloxane-coated metal fluorides, (b) polymerizable monomers, and (c) polymn. initiators. The polysiloxanes may be prepd. by condensing silanols obtained by (partial) hydrolysis of  $[(R_1O)_2SiX]_n$  ( $R_1 =$  1,1,1-trifluoro-2-org. group;  $X =$  halo;  $R_2 =$  1,1,1-trifluoro-2-org. group;  $l, m, n = 0, 1, 1 + m = 1$ ). Coating metal fluorides with polysiloxanes promotes F release without decreasing mech. properties of the compns. A mixt. of  $Si(OEt)_4$ ,  $H_2O$ ,  $EtOH$ , and  $HCl$  was heated under reflux for 2 h and the reaction mixt. was further treated with NaF powder at 130 degree. for 30 min to give NaF coated with polysiloxane. A compn. contg. Bis-GMA 40, triethylene glycol dimethacrylate (1) 40, 10 methacryloyloxydecyl dihydrogen phosphate 10,  $Bz_2O_2$  1, silane-treated quartz powder 200, and the above polysiloxane coated NaF 5 parts was mixed with another compn. contg. Bis-GMA 40, 1 20, Na 2,4,6-trisopropylbenzenesulfinate 1, N,N-diethanol-p-toluidine 1, and silane-treated quartz powder 300 parts, and the mixt. was used for adhesion between a Ni-Cr alloy sample and a SUS 204 sample.

IT 11099-06-1P, Tetraethoxysilane homopolymer 26416-05-1P,  
Bis-GMA-triethylene glycol dimethacrylate copolymer 29792-60-1P  
10424-25-1P, Vinyltriethoxysilane homopolymer 51250-55-1P,  
Phenyltriethoxysilane homopolymer, ladder sru 88123-08-1P,  
Tetraethoxysilane-vinyltriethoxysilane copolymer 89885-27-3P,  
Hexyltrimethoxysilane homopolymer 106209-50-0P 114741-08-3P,  
Phenyltriethoxysilane homopolymer 133521-11-4P 155968-09-5P,

**Propyltriethoxysilane homopolymer**, ladder sru

157445-39-0P, Hexyltrimethoxysilane homopolymer, ladder sru

150876-30-2P, **Propyltriethoxysilane homopolymer**

208855 94-5P

RL: PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(fluorine-releasing polymerizable dental compns. contg.

polysiloxane-coated metal fluorides, monomers, and polymn. initiators)

L11 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2000 ACS

TI Polymerization of trialkoxysilanes. Effect of the organic substituent on the formation of gels

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1998), 39(1), 413-419

CODEN: ACPHAY; ISSN: 0032-3834

AB Formation of gels from trialkoxysilanes was significantly hindered by sterically bulky org. substituents and by phase segn. of oligomeric or polymeric silsesquioxanes. Gels were obtained from trimethoxysilane, triethoxysilane, methyltrimethoxysilane, methyltriethoxysilane, dodecyltriethoxysilane, octadecyltrimethoxysilane, vinyltrimethoxysilane, vinyltriethoxysilane. The other monomers tested formed oligomers and polymers in the form of oils and resins. Cryst. products were obtained

despite the high monomer concns. used from a few alkyl-substituted trimethoxysilanes and a variety of triethoxysilyl monomers under acidic conditions.

IT 11090-06-1P, Ethyl silicate 12002-26-5P, Methylsilicate 25498-03-7P, Methyltrimethoxysilane homopolymer 15920-91-6P, Methyltriethoxysilane homopolymer 26255-29-3P, Propyltrimethoxysilane homopolymer 26254-45-2P, Ethyltriethoxysilane homopolymer 19182-69-1P, Vinyltrimethoxysilane homopolymer 29434-25-1P, Vinyltriethoxysilane homopolymer 51350-55-1P, Phenyltriethoxysilane homopolymer, sru 89835-06-7P, Phenyltrimethoxysilane homopolymer 124741-08-8P, Phenyltriethoxysilane homopolymer 152333-52-5P, Trimethoxysilane homopolymer 152315-80-1P, Methyltriethoxysilane homopolymer, sru 152315-81-2P, Triethoxysilane homopolymer, sru 154471-74-6P, Octadecyltrimethoxysilane homopolymer 155968-09-5P, **Propyltriethoxysilane homopolymer**, sru 156430-49-8P

160876-20-2P, **Propyltriethoxysilane homopolymer** 160929-49-7P 161844-18-4P 162111-95-1P, Isopropyltriethoxysilane homopolymer, sru 167489-10-2P, Ethyltrimethoxysilane homopolymer 171099-41-2P, Dodecyltriethoxysilane homopolymer, sru 171773-93-4P, Triethoxysilane homopolymer 180281-16-7P, Butyltrimethoxysilane homopolymer 180348-42-9P, Butyltriethoxysilane homopolymer, sru 180537-90-2P 180604-53-9P, Isobutyltriethoxysilane homopolymer, sru 180882-30-9P 207464-19-5P, tert-Butyltriethoxysilane homopolymer, sru 212474-12-5P, Isopropyltriethoxysilane homopolymer 212474-13-6P, butyltriethoxysilane homopolymer 212474-14-7P, Isobutyltriethoxysilane homopolymer 212474-15-8P, tert-Butyltriethoxysilane homopolymer 212474-16-9P, Cyclohexyltriethoxysilane homopolymer 212474-17-0P, Cyclohexyltriethoxysilane homopolymer, sru 212474-18-1P, Dodecyltriethoxysilane homopolymer 212474-20-5P 212474-21-6P 212474-22-7P 212474-23-8P 212474-24-9P

RL: PREP (Properties); SYN (Synthetic preparation); PREP (Preparation)  
(substituent effect on gel formation in polymn. of trialkoxysilanes)

L11 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS

TI Polysiloxane-coated metal fluorides and fluorine-releasing dental polymer compositions containing them

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKKXAF

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 16025116	A2	19980210	JP 1996-194035	19960725
EP 821931	A2	19980204	EP 1997-113615	19970723
EP 821921	A2	19980205		
E: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CA 2211281	AA	19990115	CA 1997-2311281	19970724
AU 9730154	A1	19980205	AU 1997-20154	19970724
AU 710254	B2	19990916		
TW 207689	B	20000711	TW 1997-86110645	19970724
CN 1172637	A	19990211	CN 1997-117825	19970725
CN 1085074	B	20020522		
US 5908879	A	19990601	US 1997-0908888	19970725

AB Metal fluorides coated with a polysiloxane layer, e.g. prepd. by (partial) hydrolysis of [(R1O)(X)m]4-nSiEt2n (R1 = C1 to req. 8 org. group; X = halo; R2 = C1 to req. 8 org. group; l, m, n = 0, 1; l + m = 1),... The compns. contain (a) the coated metal fluorides, (b) polymerizable monomers, and (c) polymn. initiators. The coated metal fluorides show good releasability without diminishing mech. properties of compns. contg. them such as tensile adhesion strength. A mixt. of Si(OC2H5)4, H2O, EtOH, and HCl was stirred under reflux for 2 h. The reaction mixt. was treated with NaF powder and subjected to a reduced pressure to remove EtOH, and the residue was heated at 120.degree. for 30 min to give polysiloxane-coated NaF powder. A compn. contg. Bis-GMA, triethylene glycol dimethacrylate

(I), 10-methacryloyloxydecyl dihydrogen phosphate,  $Bz_2O_3$ , silane-treated quartz powder, and the polysiloxane-coated NaF powder was kneaded with a compn. contg. Bis-GMA, I, 2-hydroxyethyl methacrylate, Na 2,4,6-triisopropylbenzenesulfinate, N,N-diethanol-p-toluidine, and silane-treated quartz powder, and the mixt. was pressed against a Ni-Cr alloy. After 1 h the test piece was soaked in H<sub>2</sub>O at 37.degree. for 24 h to show tensile adhesion strength 31.1 MPa. The similar test piece was further soaked in H<sub>2</sub>O at 70.degree. for 20 days to show tensile adhesion strength 28.2 MPa, vs. 15.5 MPa for a control contg. NaF powder coated with a methacrylic polymer.

IT 11002-26-5P, Tetramethoxysilane homopolymer 25930-91-0P, Methyltriethoxysilane homopolymer 29154-45-3P, Ethyltriethoxysilane homopolymer 29424-25-1P, Vinyltriethoxysilane homopolymer 51350-55-1P, Phenyltriethoxysilane homopolymer, ladder sru 83122-09-1P, Tetraethoxysilane-vinyltriethoxysilane copolymer 89885-27-8P, Hexyltrimethoxysilane homopolymer 124741-03-8P, Phenyltriethoxysilane homopolymer 153215-80-1P, Methyltriethoxysilane homopolymer, ladder sru 155969-09-5P, **Propyltriethoxysilane homopolymer**, ladder sru 156430-49-8P, Vinyltriethoxysilane homopolymer, ladder sru 157445-38-0P, Hexyltrimethoxysilane homopolymer, ladder sru 160876-39-2P 160909-49-7P, Ethyltriethoxysilane homopolymer, ladder sru  
 EL: MOA (Modifier or additive use); PRU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOB (Biological study); PRBP (Preparation); USES (Uses)  
 (P-releasing dental polymer compns. contg. polysiloxane-coated metal fluorides)

L11 ANSWER 10 OF 11 CAPLUS COPYRIGHT 1991 ACS

TI Synthesis of poly- $\gamma$ -( $\beta$ -cyanoethylmercapto) propylsiloxane platinum complex and its catalytic property

SO Yingyong Huaxue (1997), 14(4), 37-41

CODEN: YIHUED; ISSN: 1000-0518

AB  $\gamma$ -( $\beta$ -cyanoethylmercapto)propyltriethoxysilane has been synthesized from  $\gamma$ -mercaptopropyltriethoxysilane via Michael addn. with acrylonitrile in the presence of sodium ethoxide. The silicon monomer was hydrolyzed and immobilized by water and fumed silica, then reacted with potassium chloroplatinite in acetone to give the title complex. The title complex is an effective catalyst for hydrosilylation of decene, dodecene, Ph allyl ether, allyl glycidyl ether, etc. with triethoxysilane and can be reused several times without any noticeable loss of activity.

IT 195874-27-2P,  $\gamma$ -( $\beta$ -cyanoethylmercapto)

**propyltriethoxysilane homopolymer**

EL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);

PREP (Preparation); USES (Uses)

(silica-supported, support for catalyst; synthesis catalytic properties of poly- $\gamma$ -( $\beta$ -cyanoethylmercapto) propylsiloxane platinum complex)

L11 ANSWER 11 OF 11 CAPLUS COPYRIGHT 1991 ACS

TI Synthesis and applications of polysilyne thin film optical waveguide media

SO Optical Engineering (New York, NY, United States) (1992), 22(Polymers for Lightwave and Integrated Optics), 195-198

CODEN: OPENEE; ISSN: 0892-254X

AB The synthesis of some new polysilyne oligomers with superior soly., filtration, and film-forming characteristics is described, and the photoinduced oxidn. chem. responsible for their large drop in refractive index is detailed. The polymers are prepd. by treating  $RSiCl_3$  (R = iso-Pr, cyclohexyl, Ph) with ultrasound in the presence of NaK liq. alloy, which is explosive and requires extreme care in handling.

IT 41087-22 3P, Phenyltrichlorosilane homopolymer 113219-09-3P,

Cyclohexyltrichlorosilane homopolymer 134129-02-5P, Iso-

**propyltrichlorosilane homopolymer**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of, for optical waveguides, in presence of potassium-sodium  
alloy)